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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,175	10/09/2003	John L. de Ris	36737-183026	7886

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EXAMINER

PRUCHNIC, STANLEY J

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,175

Applicant(s)

DE RIS ET AL.

Examiner

Stanley J. Pruchnic, Jr.

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Suggested Drawing Change (1 sheet)

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (Claims 1-10) in the reply filed on 27 August 2004 is acknowledged.
2. Claims 11-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 27 August 2004.
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

4. The drawings are objected to because reference characters 10 and 22 are not clearly indicating the respective features. A suggested drawing change is attached showing arrows indicating the location of the respective features.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 9 is objected to because of the following informalities: In Line 2, "the electric-resistance heating element" lacks antecedent basis since, in claim 1, although, "an electrical heating element" is introduced, it is not already indicated that it is "an electric-resistance heating element". For consideration as to the merits, it is considered that the electric-resistance heating element of Claim 9 is referring to the same heating element introduced in Claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rolinski, Edmund J. *et al.* (U. S. Patent No. 4309901 A, hereinafter **ROLINSKI**) in view of Smith *et al.* (U. S. Pat. No. 5,161,889 A, hereinafter **SMITH**).

Regarding Claims 1 and 5-10:

ROLINSKI discloses a measuring device for determining the radiant heat flux (using heat flux gauges 18, 18') received by a test specimen having a coating to

Art Unit: 2859

improve the absorption of the radiant heat flux as claimed by Applicant in Claims 1-10, comprising:

a body (12, 14);

a coating (the anodized copper plate 12 inherently has an oxide coating, as is well known; Col. 1, Lines 30-31) on said body (12);

an electrical heating element (means *for heating* 16; Col. 2, Lines 28-29) in heat transfer relationship with said body, free from interposition, between the heating element (means *for heating* 16) and said body (12), of the coating on said body (12) ; and

a thermal detector 26 (Col. 2, Lines 8-17) which is a means *for indicating* the temperature of the body; and further regarding Claim 7, the thermal detector 26 is a thermocouple connected to said body (Col. 2, Lines 8-9); as claimed by Applicant in Claims 1, 7 and 10.

Regarding Claim 5: **ROLINSKI** discloses the electrical heating element 16 is positioned within said body (considering the body to be composed of the joined plates 12 and 14; see Fig. 2).

Regarding Claim 6: **ROLINSKI** discloses the electrical heating element is an electric resistance heating element 16 (Col. 2, Lines 28-29).

Regarding Claim 8: **ROLINSKI** further discloses an insulated holder (33) for said body 12, wherein said body 12 has a first surface to which the coating is applied and at least one other surface (i.e, the surface between the plates 12, 14; Col. 2, Lines 21-27), said first surface being exposed for receiving radiant heat flux, and said other surface being covered by the insulated holder (33).

Regarding Claim 9: **ROLINSKI** further discloses means (rheostat 56; Col. 2, Lines 64-66) for indicating the electrical power applied to the electric-resistance heating element 16.

ROLINSKI as described above, does not explicitly disclose the coating on said body being the same as the coating on a test specimen as claimed by Applicant in Claim 1.

ROLINSKI, to summarize, discloses all the limitations as claimed by Applicant in Claims 1 and 5-10, as described above, except that, **ROLINSKI** does not explicitly disclose the coating on said body being the same as the coating on a test specimen as claimed by Applicant in Claim 1.

SMITH discloses a measuring device for determining the radiant heat flux received by a test specimen having a coating to improve the absorption of the radiant heat flux, comprising: a body (30; being a metal disk, and the disk may be copper; Col. 5, Lines 1-8)

SMITH further discloses that it is advantageous to include a coating on said body being the same as the coating on a test specimen (e.g., a process product, a food product) in order to benefit from more accurate simulation of the radiant heating of the specimen by matching their emissivities (Col. 10, Lines 11-30).

SMITH is evidence that ordinary workers in the field of radiant heating evaluation would recognize the benefit of using a body having the same coating as a test specimen as suggested by **SMITH** for the anodized coating of **ROLINSKI** in order to more accurately determine the radiant heat flux received by a test specimen.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the same coating as a test specimen for the anodic copper coating of **ROLINSKI** in order to more accurately determine the radiant heat flux received by a test specimen as taught by **SMITH**.

Further regarding Claims 2-4:

Regarding Claim 2: **ROLINSKI** does not disclose said body has a shape similar to that of a test specimen. Further regarding Claim 3, **ROLINSKI** does disclose said body is made of copper (Col 1, Lines 60-61). Regarding Claim 4: **ROLINSKI** does

disclose discloses said body is a metal (copper), as described above, but does not disclose said body is a metal disk.

To summarize, **ROLINSKI** discloses all the limitations as claimed by Applicant in Claims 2-4, except for the limitation wherein said body has a shape similar to that of a test specimen and except for the limitation wherein said body is a metal disk as claimed by Applicant in Claims 2 and 4.

SMITH discloses a measuring device for determining the radiant heat flux received by a test specimen having a coating to improve the absorption of the radiant heat flux, comprising: a body (30; being a metal disk, being "cylindrical or plate shaped"; Col. 7, Lines 17-31; see also Col. 6, Line 60 - Col. 7, Line 3; and having a shape similar to a specimen; Col. 12, Lines 51-60)

SMITH further discloses that it is advantageous to use a metal disk shape in order to benefit from having a smaller number of non-uniformities; and to use a body having a shape similar to a specimen, in order to benefit from the body more suitably simulating the product (specimen) going through the heat exchange process (Col. 7, Lines 17-31).

SMITH is evidence that ordinary workers in the field of radiant heating evaluation would recognize the benefit of using a body having a metal disk shape in order to benefit from having a smaller number of non-uniformities.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a disk shaped body for the square shaped body of **ROLINSKI** in order to benefit from having a smaller number of non-uniformities as taught by **SMITH**.

SMITH is evidence that ordinary workers in the field of radiant heating evaluation would recognize the benefit of using a body having a shape similar to a specimen in order to benefit from the body more suitably simulating the product.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a body having a shape similar to a specimen for the square plate body of **ROLINSKI** in order to benefit from the body more

suitably simulating the product going through the heat exchange process as taught by SMITH.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in a form PTO-892 and not mentioned above disclose related radiant heat flux measurement devices.

- U. S. Patent No. 3819419 A (Loose, Jack D.) and U. S. Patent No. 3765238 A (Sumikama et al.) disclose heat flux sensors including coatings for controlling the spectral band sensitivity or controlling the heat flow, e.g., adjusting emissivity.
- U. S. Patent No. 2769334 A (ERICH SOEHNGEN) discloses electrical heating in a (convective) heat transfer simulator, wherein a body 12 may be a sample of a test specimen, and including a thermocouple for indicating the specimen temperature.
- U. S. Patent No. 4906105 A (Geake, John E.), U. S. Patent No. 3431149 A (ROBINSON GERALD P et al.), and U. S. Patent No. 3088072 A (CLIFFORD RICHARD P et al.) disclose related radiant heat flux sensing devices.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stanley J. Pruchnic, Jr., whose telephone number is **(571) 272-2248**. The examiner can normally be reached on weekdays (Monday through Friday) from 7:30 AM to 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. F. Gutierrez can be reached at **(571) 272-2245**.

The **Official FAX** number for Technology Center 2800 is **(703) 872-9306** for **all official communications**.

Any inquiry of a general nature or relating to the status of this application or proceeding may be directed to the official USPTO website at **<http://www.uspto.gov/>** or you may call the **USPTO Call Center** at **800-786-9199** or 703-308-4357. The Technology Center 2800 Customer Service FAX phone number is (703) 872-9317.

Art Unit: 2859

The cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources.

Private PAIR provides external customers Internet-based access to patent application status and history information as well as the ability to view the scanned images of each customer's own application file folder(s).

For inquiries relating to Patent e-business products and service applications, you may call the **Patent Electronic Business Center (EBC)** at **703-305-3028** or toll free at **866-217-9197** between the hours of **6 a.m. and midnight Monday through Friday EST**, or by e-mail at: ebc@uspto.gov. Additional information is available on the Patent EBC Web site at: <http://www.uspto.gov/ebc/index.html>.



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11/6/04